

Serial No. 10/634,430

In the Claims

Please substitute the following claims for those currently on file in the application:

1. (Currently Amended) A power supply comprising:

a DC-to-DC converter including an output for connection to a load, a means for deriving a signal representative of the voltage at the output, and a control circuit for controlling the voltage at the output in dependence upon the derived signal;

means for connecting the output to the load;

means for deriving a digital representation of the voltage at the load;

a processor for deriving a digital correction signal from the digital representation;

means for converting the digital correction signal to an analog correction signal; and

means for combining the analog correction signal with the derived signal so as to improve the tolerance of the voltage applied to the load.

2. (Currently Amended) ~~The power supply according to claim 1~~ A power supply comprising:

a DC-to-DC converter including an output for connection to a load, a means for deriving a signal representative of the voltage at the output, and a control circuit for controlling the voltage at the output in dependence upon the derived signal;

means for connecting the output to the load;

means for deriving a digital representation of the voltage at the load;

a processor for deriving a digital correction signal from the digital representation;

means for converting the digital correction signal to an analog correction signal; and

means for combining the analog correction signal with the derived signal, wherein the means for deriving a digital representation and the means for converting the digital correction signal each have a resolution of at least 2^{12} steps.

3. (Canceled)

4. (Currently Amended) ~~The power supply according to claim 3;~~ A power supply comprising:

a DC-to-DC converter including an output for connection to a load, a means for deriving a signal representative of the voltage at the output, and a control circuit for controlling the voltage at the output in dependence upon the derived signal;

means for connecting the output to the load;

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means for deriving a digital representation of the voltage at the load;

a processor for deriving a digital correction signal from the digital representation;

means for converting the digital correction signal to an analog correction signal; and

means for combining the analog correction signal with the derived signal,

wherein the means for connecting and the means for combining comprise resistive elements and wherein tolerances of the resistive elements and resolution of the means for deriving a digital representation and the means for converting the digital correction signal are selected such that the voltage supplied to the load has a tolerance equal to or better than approximately $\pm 2\%$.

5. (Canceled)

6. (Canceled)